

DATALOGIC

JOYA
touch

Staging Utility



User's Guide

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Patents

Patent. See www.patents.datalogic.com for patent list.



Table of Contents

JOYA TOUCH Staging Utility	1
Datalogic Staging Configurator	1
Configuration File Sections	3
Configuration example	9
Device Staging	11
Clean Boot.....	11
Start Staging Procedure	13

NOTES

JOYA TOUCH Staging Utility

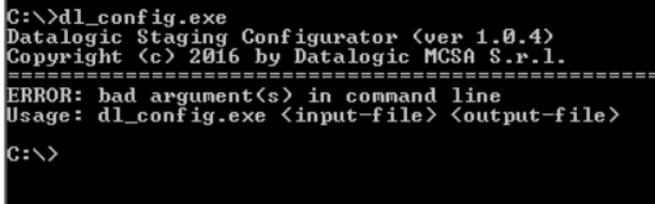
This guide defines methods and procedures required to properly configure a device coming from the factory (either brand new or repaired). This task is particularly important when the number of devices is high, because the operations that must be done are obviously repetitive and hence error prone.

The focus is to make this process as simple as possible.

Datalogic Staging Configurator

The Datalogic Staging Configurator (`dl_config.exe`) is a Windows based PC application. It is provided as a command line utility, that allows, starting from a suitable text file, to create one or more configuration barcodes. These barcodes can be used together with the staging utility available in the target device to properly configure the Wi-Fi radio parameters and the software provisioning service (SPS).

To use the program, open a Command Prompt window and browse up to the folder containing the application. Type *dl_config.exe*.



```
C:\>dl_config.exe
Datalogic Staging Configurator (ver 1.0.4)
Copyright (c) 2016 by Datalogic MCSA S.r.l.
=====
ERROR: bad argument(s) in command line
Usage: dl_config.exe <input-file> <output-file>
C:\>
```

An embedded message will explain the usage.

The input text file that must be submitted contain the following sections:

- General Configuration
- Settings
- Network Configuration
- SPS Configuration.

Here below a staging configuration text file example:

[General]

OutputFolder=
BarcodeType=2D
Barcode1DLimit=50
Barcode2DLimit=500

[Settings]

TargetPath=\\FlashDisk
Action=cold-boot

[Network]

Profile=Datalogic
ESSID=tsp_ap
Encryption=WPA-PSK
Key=TSP_WIFI
Authentication=none
Credentials=
RegulatoryDomain=etsi
RadioMode=ABGN
PowerSave=FAST
DFSCchannels=OFF
CCXFeatures=FULL

[SPS]

Protocol=http
Server=10.1.1.1
Port=80
Resource=staging/archive.zip

The file containing the configuration will be referred in the following as the 'inputConfigFile" and it is supposed to be in the folder where the Datalogic Staging Configurator is running.

The *dl_config.exe* application is launched as a windows command line utility:

dl_config.exe <inputConfigFile> <outputPdfFile>

As output, it generates a pdf file containing one or more barcodes in a numbered sequence. The file header (filename) indicates the configuration text file that generated the document.

The barcodes embedded in this pdf carry encrypted data in order to not give any hint about the network access parameters.

When a parameter must be changed, all the section related parameters (whole section) must be specified, but it's not necessary to configure every section if no modification is required.

Configuration File Sections

General Configuration

This section configures the utility main parameters:

- **BarcodeType: (optional, default=2D)** specifies the type of the barcode that will contain the configuration. Possible values are:
 - **2D:** the barcode generated will be a two-dimensional barcode (QR Code)
 - **1D:** Currently unavailable
- **Barcode1DLimit: (optional, default=50)** Currently unused.
- **Barcode2DLimit: (optional, default=400)** maximum amount of data to be encoded in a single barcode. If the encoded data exceed this limit, additional 2D codes will be generated. For readability purposes, do not exceed 700 chars.

-
- **OutputFolder: (optional, default utility folder)** folder where the Datalogic Staging Configurator is running and that contains the pdf file with the configuration barcodes.

Settings Configuration

This section configures the stager application behavior:

- **TargetPath: (optional, default=\FlashDisk)** specifies the device target folder for the deployment.
- **Action: (optional, default=cold-boot)** specifies the action to be performed at the very end of the device configuration process. Possible values are:
 - **close:** closes the staging application.
 - **stay:** keeps the staging application open and wait for the user input.
 - **cold-boot:** performs a hardware reset.
 - **warm-boot:** performs a software reset.
 - **clean-boot:** issues a clean boot request.

Radio Configuration

This section configures the device radio parameters:

- **Profile: (optional, default=Datalogic)** specifies the name of the Wi-Fi configuration profile to be created.
- **ESSID: (mandatory)** specifies the Extended Service Set Identification, i.e. a 32-character (maximum) alphanumeric key identifying the name of the wireless local area network. **Please note that "ESSID" is case sensitive.**
- **Encryption: (mandatory)** specifies the Wi-Fi network encryption type. The possible values are:
 - **OPEN**

-
- WEP-40
 - WEP-104
 - WPA-PSK
 - WPA2-PSK
 - WAPI-PSK
 - WPA-TKIP
 - WPA2-AES
 - WPA2-TKIP
 - CCKM-TKIP
 - CCKM-AES
 - WAPI-CERT
- **Key: (mandatory)** the encryption key used in the network. In case of Encryption=OPEN value must be **"NONE"**. **Please note that "key" is case sensitive.**
 - **Authentication (optional, default=NONE):** must be specified only in case of EncryptionType=WPA-TKIP, WPA2-AES, WPA2-TKIP, CCKM-TKIP, CCKM-AES, and WAPI-CERT. Possible values are:
 - NONE
 - LEAP
 - EAP-FAST
 - PEAP-MSCHAP
 - PEAP-TLS
 - EAP-TLS
 - EAP-TTLS
 - PEAP-TLS
 - WAPI-CERT

-
- **Credentials: (optional except for Authentication=NONE)** the credentials for the EAP authentication. Not needed in case of Authentication=NONE. **Please note that "Credentials" is case sensitive.**
 - **RegulatoryDomain: (mandatory)** specifies the regulatory domain. Possible values are:
 - FCC
 - ETSI
 - TELEC
 - World-Wide
 - Korea
 - Canada
 - France
 - United Kingdom
 - Australia
 - New Zealand
 - China
 - **PowerSave: (optional, default=FAST)** specifies the power index. Possible values are:
 - CAM
 - FAST
 - MAX
 - **RadioMode: (mandatory)** specifies the radio mode. Possible values are:
 - B
 - BG
 - G

-
- **BG-LRS**
 - **ABG**
 - **BGA**
 - **AD-HOC**
 - **GN**
 - **AN**
 - **ABGN**
 - **BGAN**
 - **BGN**
 - **DFSCchannels: (optional, default=FULL)** specifies the Dynamic Frequency Selection. Possible values are:
 - **OFF**
 - **FULL**
 - **OPTIMIZED**

Deployment Configuration

This section configures the software provisioning service, i.e. the service used to download the application software that will be installed in the device. The software must be provided only as a zip file.

Parameters required for the Shopevolution application are:

- **Protocol: (mandatory)** specifies the protocol to be used to download the application on mobile:
 - **HTTP**
 - **FTP**
- **Server: (mandatory):**
 - *< HTTP/FTP server name> or < HTTP/FTP server IP address>*

-
- **Port: (mandatory)** port where the server is listening for the download
 - **Any available port**
 - **Resource: (mandatory):**
 - **Path and zip filename.**

Configuration example

Here below a configuration example file:

[General]

OutputFolder=
BarcodeType=2D
Barcode1DLimit=50
Barcode2DLimit=500

[Settings]

TargetPath=\FlashDisk
Action=cold-boot

[Network]

Profile=Datalogic
ESSID=tsp_ap
Encryption=WPA-PSK
Key=TSP_WIFI
Authentication=none
Credentials=
RegulatoryDomain=etsi
RadioMode=ABGN
PowerSave=FAST
DFSCchannels=OFF
CCXFeatures=FULL

[SPS]

Protocol=http
Server=10.1.1.1
Port=80
Resource=staging/archive.zip

The plain text file will be named *staging_config.ini*.
Execute in a command prompt window:

```
C:\test>dl_config.exe staging_config.ini staging_config.pdf
Datalogic Staging Configurator (ver 1.0.3)
Copyright (c) 2016 by Datalogic MCSA S.r.l.
=====
Loading file 'staging_config.ini'
Processing data
Generating PDF file
Created file 'staging_config.pdf'
C:\test>
```

A pdf file will be generated in the same folder:

staging_config.ini

1/1



Device Staging

Clean Boot

Using a folded paper clip (see figure below), press and keep pressed the inner reset key while keeping pressed the home key for about 10 seconds, until the screen becomes dark.

Extract the paperclip while keeping pressed the home key, the device will restart.

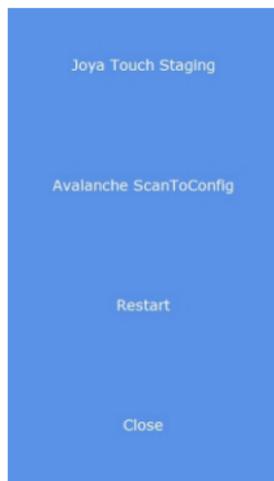
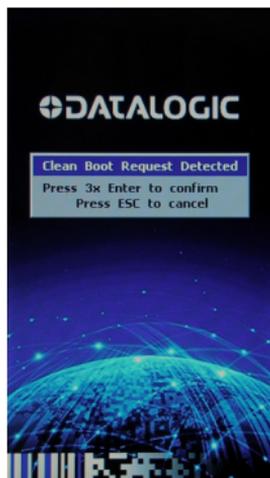


When the *Clean Boot Request Detected* message appears on the screen, release and then quickly press three times the home key to acknowledge; a suitable system message will confirm the operation.

When the reboot ends, a choice menu will appear:

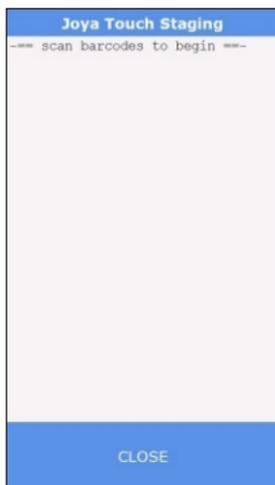
- **Joya Touch Staging:** starting point for the staging procedure
- **Avalanche ScanToConfig:** uses an Avalanche server as configurator.

-
- **Restart:** reboots the device.
 - **Close:** exits to the operating system.



Start Staging Procedure

Tap the screen message **Joya Touch Staging** to begin the staging procedure.



A system message will require the configuration code reading. The code can be scanned from printed paper as well as from PC monitor.

In case of mistakes, tap **CLOSE** to exit to the operating system.



Each staging step is echoed on the display:

- Configuration acquisition (from barcode) and parsing.
- Network configuration and IP acquisition.
- Software provisioning service connection established.
- Application download.

NOTES



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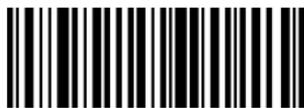
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